CLAIMS

1. A method for removing the diketone of the optionally oxidized N-terminal methionine residue, that is characterized by having a peptide or a salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue react with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate.

2. The method described in Claim 1 wherein the peptide or the salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue is a peptide or a salt thereof which is obtained by having a peptide or a salt thereof which possesses optionally oxidized N-terminal methionine residue react with an α-diketone.

3. The method described in Claim 2 wherein the peptide which possesses optionally oxidized N-terminal methionine residue is a peptide which has been manufactured by genetic engineering technology.

4. The method described in Claim 1 wherein the peptide is (i) a growth hormone, (ii) beta-cellulin, (iii) interleukin-2, (iv) neurotrophin-3, or (v) apelin.

5. The method described in Claim 1 wherein the peptide is a growth hormone.

6. The method described in Claim 1 that is characterized by the acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate being used as a buffer solution of approximately 0.1 to 8 mol/L, with a pH of approximately 2 to 9.

7. A method for removing the diketone of the optionally oxidized N-terminal methionine residue that is characterized by having a peptide or a salt thereof

which possesses a diketone of the optionally oxidized N-terminal methionine residue react with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate.

8. A method for the manufacture of a peptide or a salt thereof which does not possess optionally oxidized N-terminal methionine residue characterized by having a peptide or a salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue react with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate.

9. The method of manufacture described in Claim 8 wherein the peptide or the salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue is a peptide or salt thereof obtained by having a peptide or salt thereof which possesses optionally oxidized N-terminal methionine residue react with an α-diketone.

10. The method of manufacture described in Claim 8 that is characterized by the acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate being used as a buffer solution of approximately 0.1 to 8 mol/L, with a pH of approximately 2 to 9.

11. A method for manufacturing a peptide or a salt thereof which does not possess N-terminal methionine residue characterized by having a peptide or salt thereof which possesses a diketone of the N-terminal methionine residue react with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate.

12. A method for manufacturing human growth hormone or a salt thereof which does not possess N-terminal

methionine residue characterized by having a genetically engineered peptide or salt thereof which possesses optionally oxidized N-terminal methionine residue react with glyoxylic acid or a salt thereof in the presence of cupric sulfate and pyridine, then with 3,4-diaminobenzoic acid or a salt thereof in the presence of acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate.

13. The use of (i) acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate, and (ii) 3,4-diaminobenzoic acid or a salt thereof, for the purpose of removing the methionine residue from a peptide or a salt thereof which possesses optionally oxidized N-terminal methionine residue.

14. The use of (i) acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate, and (ii) 3,4-diaminobenzoic acid or a salt thereof, for the purpose of removing the diketone of the methionine residue from a peptide or a salt thereof which possesses a diketone of the optionally oxidized N-terminal methionine residue.

15. The use of (i) acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate, and (ii) 3,4-diaminobenzoic acid or a salt thereof, for the purpose of manufacturing a peptide or a salt thereof which does not possess optionally oxidized N-terminal methionine residue from a peptide or a salt thereof which possesses optionally oxidized N-terminal methionine residue.

16. The use of (i) acetic acid and sodium formate, formic acid and sodium formate, or formic acid and sodium acetate, and (ii) 3,4-diaminobenzoic acid or a salt thereof, for the purpose of manufacturing a peptide or a salt thereof which does not possess a

diketone of optionally oxidized N-terminal methionine residue from a peptide or a salt thereof which possesses a diketone of optionally oxidized N-terminal methionine residue.

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